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UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/904,566	07/16/2001	Choi Joon-Bo	Q63227	2317

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EXAMINER
LIN, KENNY S

ART UNIT	PAPER NUMBER
2154	

DATE MAILED: 02/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

		Application No.	Applicant(s)
Office Action Summary		09/904,566	JOON-BO ET AL.
		Examiner	**Art Unit**	
		Kenny Lin	2154	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>20 October 2003</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-14</u> is/are pending in the application.

　　4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-14</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

　　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

　　Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

　　a)☒ All   b)☐ Some *   c)☐ None of:

　　　1.☒ Certified copies of the priority documents have been received.

　　　2.☐ Certified copies of the priority documents have been received in Application No. _____.

　　　3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
　　　　　application from the International Bureau (PCT Rule 17.2(a)).

　　* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
　　Paper No(s)/Mail Date <u>all 3</u>.

4) ☐ Interview Summary (PTO-413)
　　Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

1.   Claims 1-14 are presented for examination.

2.   The IDS have been considered by the examiner.

Claim Rejections - 35 USC § 112

3.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4.   Claims 10-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

>   a.   The following terms lack proper antecedence basis:
>
>   i.   Claim 10, line 1 and 13 – "step (d)" (i.e., do you mean "step (c)"? Step
>
>   (d) was found in claim 9 which claim 10 is not depended on).

Claim Rejections - 35 USC § 102

5.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

6.   Claims 1-2, 7-9 and 14 are rejected under 35 U.S.C. 102(a) as being anticipated by Ying,

US 6,061,600.

7.   As per claim 1, Ying taught the invention as claimed including a method for building up

backup master information, comprising the steps of:

> a.   Receiving connection information from at least one of a plurality of slaves in a
>
> network (col.2, lines 48-51, col.4, lines 31-42, col.5, lines 32-33, 54-59, col.7,
>
> lines 5-23, col.10, lines 50-65);
>
> b.   Determining a priority of said at least one of the plurality of slaves to be used as a
>
> backup master, when a network master disappears, according to the received
>
> connection information (col.2, lines 44-54, col.7, lines 35-49, col.10, lines 50-67,
>
> col.11, lines 1-30, 51-58); and
>
> c.   Announcing the determined priority information of backup master to at least
>
> another one of the plurality of slaves (col.2, lines 44-58, col.11, lines 24-35).

8.   As per claim 2, Ying taught the invention as claimed in claim 1. Ying further taught that

the steps a. through c. are repeated in a predetermined cycle (col.2, lines 48-62, col.11, lines 51-

58).

9.   As per claim 7, Ying taught the invention substantially as claimed in claim 1. Ying

further taught that in the step c., the determined priority of the backup master is announced to the

at least another one of the plurality of slaves, through a broadcasting channel (col.2, lines 44-58,

col.8, lines 35-39, col.9, lines 31-38, col.11, lines 24-35).

10.   As per claim 8, Ying taught the invention as claimed including a method for designating

a new master of a network when a preexisting network master disappears, the method

comprising the steps of:

>   a.   Determining whether the preexisting network master has disappeared (col.2, lines
>
>   48-51, col.7, lines 5-23, 35-49, col.10, lines 50-65);
>
>   b.   If the preexisting network master has disappeared, determining a rank, which is
>
>   used to choosing a new network master and is received before the disappearance
>
>   of the preexisting network master (col.2, lines 44-54, col.7, lines 35-49, col.10,
>
>   lines 50-67, col.11, lines 1-30, 51-58); and
>
>   c.   Changing to a role as the new network master if the rank is highest of any one of a
>
>   plurality of slaves (col.2, lines 48-54, col.7, lines 35-49, col.11, lines 24-58).

11.   As per claim 9, Ying taught the invention substantially as claimed in claim 8. Ying

further taught that after the step c., further comprising the step d. of performing inquiry scan and

page scan (col.2, lines 37-39, col.9, lines 6-22, col.10, lines 15-23, 54-62, col.11, lines 24-58).

12.   As per claim 14, a method for establishing a connection between a new master and a

remaining plurality of slaves of a network when a preexisting network master disappears, the

method comprising the steps of:

    a. Checking whether the preexisting network master has disappeared (col.2, lines 48-51, col.7, lines 5-23, 35-49, col.10, lines 50-65);

    b. Checking backup master rank information, when it is determined that the preexisting network master has disappeared in the step a. (col.2, lines 44-54, col.7, lines 35-49, col.10, lines 50-67, col.11, lines 1-30, 51-58).

    c. Attempting to establish a connection with the new network master when it is determined that one of the remaining plurality of slaves does not have the highest priority, according to the backup master rank information (col.2, lines 37-39, col.7, lines 39-49, col.9, lines 6-22, 43-48, col.10, lines 15-23, 36-43, 54-62, col.11, lines 1-9, 24-58); and

    d. Remaining as one of the remaining plurality of slaves if a connection with the new network master is established in step c. (col.7, lines 39-49, col.11, lines 1-9, col.12, lines 38-42).

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

14. Claims 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ying, US 6,061,600, in view of Erekson et al (Erekson), US 6,836,862.

15.   As per claim 3, Ying taught the invention substantially as claimed in claim 1. Ying did

not specifically teach that the received connection information includes received signal strength

indication and/or link quality information. Erekson taught a network of devices acting as master

and slaves using signal strength indication wherein the devices are equipped with a receiver

signal strength indicator that can be used to measure the strength of the incoming signal (col.2,

lines 16-21, col.3, lines 37-42, col.5, lines 31-41). It would have been obvious to one of ordinary

skill in the art at the time the invention was made to combine the teachings of Ying and Erekson

because Erekson's teaching of using received signal strength indication enables Ying's method

to support devices used for voice applications to measure the strength of the incoming signal

(col.2, lines 16-19).

16.   Claims 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ying, US

6,061,600, in view of "Official Notice".

17.   As per claim 6, Ying taught the invention substantially as claimed in claim 1. Ying did

not specifically teach that the network is a personal ad-hoc network. However, Official Notice is

taken that the limitations narrowed by this claim are consider obvious and furthermore a matter

of design choice of implementing the invention in various types of networks. It would have been

obvious to one of ordinary skill in the art at the time the invention was made to combine the

teachings of Ying and further implement Ying's method in all suitable and desired networks.

18.   Claims 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ying and

Erekson as applied to claim 3 above, and further in view of "Official Notice".

19.   As per claim 4, Ying and Erekson taught the invention substantially as claimed in claim

1. Erekson further taught to use receiver strength indicator to measure the strength of the

incoming signal (col.2, lines 16-19). Ying and Erekson did not specifically teach that in the step

b., if said at least one of the plurality of slaves has a higher RSSI than another one of the plurality

of slaves, said at least one of the plurality of slaves is given a higher priority, which is used to

choose a new network master. However, Official Notice is taken that the limitations narrowed

by this claim are consider obvious and furthermore a matter of design choice in determining the

ranking of the priority values. It would have been obvious to one of ordinary skill in the art at

the time the invention was made to combine the teachings of Ying, Erekson and various methods

and calculations in determining and deciding the ranking of the priority of the plurality of slaves

in Ying and Erekson's method.

20.   As per claim 5, Ying and Erekson taught the invention substantially as claimed in claim

1. Ying and Erekson did not specifically teach that in the step b., if said at least one of the

plurality of slaves has a higher link quality value than another one of the plurality of slaves, said

at least one of the plurality of slaves is given a higher priority, which is used to choose a new

network master. However, Official Notice is taken that the limitations narrowed by this claim

are consider obvious and furthermore a matter of design choice in determining the ranking of the

priority values. It would have been obvious to one of ordinary skill in the art at the time the

invention was made to combine the teachings of Ying, Erekson and various methods and

calculations in determining and deciding the ranking of the priority of the plurality of slaves in

Ying and Erekson's method.

21.   Claims 10-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ying, US

6,061,600, in view of Akyol et al (Akyol), US 6,701,448 and "Official Notice".

22.   As per claim 10, Ying taught the invention substantially as claimed in claim 8. Ying

further taught to check for a change of a master mode and terminating the master mode when a

change to the master mode is determined (col.2, lines 37-39, col.3, lines 15-20, col.7, lines 39-

49, col.9, lines 6-22, 43-48, col.10, lines 15-23, 36-43, 54-62, col.11, lines 1-9, 24-58). Ying did

not specifically teach that after step d., further comprising the steps of e-g. Akyol taught a

backup master designating method to:

   e. determining whether a new device attempts to establish a connection through

the network (col.7, lines 18-35);

   f. accepting a request of the new device for connection, requesting the new device

to change to a role as a slave, and remaining as the new network master (col.7, lines 21-

35);

   g. storing information of the new device, and announcing the information of the

new network master and each of the plurality of slaves linked throughout the network, to

each of the plurality of slaves linked throughout the network (col.6, lines 51-55, 60-67,

col.7, lines 5-8).

23.   It would have been obvious to one of ordinary skill in the art at the time the invention

was made to combine the teachings of Ying and Akyol because Akyol's teaching of responding

to requests for new devices to join the group enables more devices in Ying's method to join or

connect with the master node to expand the group. Ying and Akyol did not specifically teach

that if there is no connection request form the new device, return to step d. when no change to

the master mode is determined. However, it is obvious that the mastership of the master node is

not affected when no new device, which might affect the mastership because of its priority, is

requesting to connect with the master node. Official Notice is taken that it would have been

obvious to maintain the structure of the group and the mastership of the master node when no

additional node is joining the group. It would have been obvious to one of ordinary skill in the

art at the time the invention was made to combine the teachings of Ying, Akyol and further

maintain the master mode when no change in the group structure is made.

24.   As per claim 11, Ying and Akyol taught the invention substantially as claimed in claim

10. Ying further taught that the change of master mode is determined when a role of a device

serving as the preexisting network master is changed to a role as one of the plurality of slaves

(col.2, lines 37-39, col.3, lines 15-20, col.7, lines 39-49, col.9, lines 6-22, 43-48, col.10, lines 15-

23, 36-43, 54-62, col.11, lines 1-9, 24-58). Ying and Akyol did not specifically teach that that

change is caused by a user, when a Bluetooth function of the preexisting network master is

switched off, or when power of the preexisting network master is turned off. However, it is

obvious for a user to power off the master node to cause a change in master mode (e.g., forcing

master disappearing). Official Notice is taken that it would have been obvious to have a user to

manually switch the master mode in any desired circumstances. It would have been obvious to

one of ordinary skill in the art at the time the invention was made to combine the teachings of

Ying, Akyol and further allows user to manually control the switching of mastership in Ying and

Akyol's method when it is needed.

25.   As per claim 12, Ying taught the invention substantially as claimed in claim 8. Ying

further taught to check a connection status with the preexisting network master (col.2, lines 37-

39, col.9, lines 6-22, col.10, lines 15-23, 54-65, col.11, lines 24-58) and determine whether the

preexisting network master has disappeared (col.2, lines 48-51, col.7, lines 5-23, 35-49, col.10,

lines 50-65). Ying did not specifically teach that step a. comprises the sub-steps of a2-a3. Akyol

taught a backup master designating method to:

>   a2. attempting to reconnect with the preexisting network master if disconnection is
>
>   detected in sub-step a1 (col.6, lines 60-67, col.7, lines 5-8, 21-35).
>
>   a3. checking whether reconnection with the preexisting network master is successful,
>
>   and returning to the sub-step al. if the reconnection with the preexisting network
>
>   master is successful (col.7, lines 21-35).

26.   It would have been obvious to one of ordinary skill in the art at the time the invention

was made to combine the teachings of Ying and Akyol because Akyol's teaching of responding

to requests for new devices to rejoin the group enables the devices in Ying's method to reconnect

with the master node when connection is lost. Ying and Akyol did not specifically teach that if

reconnection with the preexisting network master is not established in sub-step a3. informing a host of the event as a "Disconnection Complete Event". However, it is obvious to report error when attempting to connect with the master node fails. Official Notice that both the concept and advantage of sending notification to inform of errors is well known and expected in the art. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Ying, Akyol and further uses event notification method to inform the hosts of failure in communication with the master node.

27.   As per claim 13, Ying and Akyol taught the invention substantially as claimed in claim 12. Ying further taught that the sub-step a1 is repeated in a predetermined cycle while the connection with the preexisting network master remains (ol.2, lines 37-39, col.10, lines 59-65).

Conclusion

28.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

TEXT OF THE FIRST OFFICE ACTION, Chinese Patent Application No. 01119547.9,

pages 4-7.

Mahany et al, US 5,682,379.

Jurkevich, US 5,295,137.

McCanne et al, US 6,415,323.

Quoc et al, US 6,092,214.

Azagury et al, US 6,493,716.

29.   A shortened statutory period for reply to this Office action is set to expire THREE

MONTHS from the mailing date of this action.

30.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Kenny Lin whose telephone number is (571) 272-3968. The

examiner can normally be reached on 8 AM to 5 PM Tue.-Fri. and every other Monday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, John Follansbee can be reached on (571) 272-3964. The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

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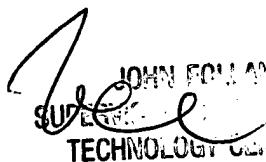
JOHN FOLLANSBEE
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